

**Normand's Rule**  
AOS 330  
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Given the dry-bulb temperature  $T$ , the wet-bulb temperature  $T_w$ , and the station pressure  $p$ , you can use a thermodynamic diagram (e.g., Skew-T) to estimate the dewpoint using *Normand's Rule*.

1. Mark a dot at the intersection of  $T$  and  $p$  on the diagram.
2. Mark a dot at the intersection of  $T_w$  and  $p$ .
3. Follow a dry adiabat upward from the dot for  $T$  and a moist adiabat up from the dot for  $T_w$  and make a dot where they intersect.
4. Follow a saturation mixing ratio line down from the above intersection and note where it crosses the original pressure  $p$ . The temperature at this intersection is the dewpoint  $T_d$ .

Given the temperature  $T$ , the dewpoint  $T_d$ , and the pressure  $p$ , you can determine the relative humidity from a thermodynamic diagram as follows:

1. If not already marked (see previous section), mark the locations of  $T$  and  $T_d$  at pressure  $p$ .
2. Read the mixing ratio  $w$  corresponding to the dewpoint  $T_d$ .
3. Read the saturation mixing ratio  $w_s$  corresponding to the temperature  $T$ .
4. The relative humidity is just  $w/w_s$ , usually expressed in percent.